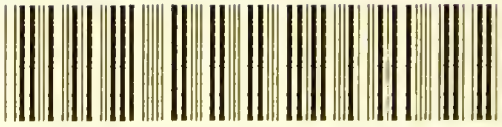
Strictures on the Urethra



ON

STRICTURE OF THE URETHRA;

PROSTATIC, BLADDER,

AND

KINDRED URINARY DISEASES;

THEIR RAPID AND PAINLESS TREATMENT, WITH CASES CURED.

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Ninth Thousand.

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PREFACE TO THE NINTH EDITION.

In the present edition I propose to lay a little more stress on operative measures than I have done in some previous issues of this little book, which was originally written partly with the idea of insisting on the great value of medicines (so generally despised) in the treatment of stricture of the urethra.

Why is it that this disease is so universally regarded as incurable, both by doctors and patients? "Once a stricture, always a stricture," is the common belief. The operation, as usually performed, gives but temporary relief, and sometimes not even that, because medical men adhere to the old-fashioned idea that a 12, or at most a 14, English instrument is full size for all penes. Surely a man whose flaccid penis is four inches in circumference ought to have a more capacious urethra, and therefore to take a larger instrument than one whose penis is only half the size! The self-obvious rule of Otis, that the size of the pipe depends on the size of the penis, and that there is a fixed relationship between the two, seems hardly known in this country yet, still less acted upon, even amongst specialists.

The simple fact that the urethra is an elastic tube (when not thickened and hardened by stricture), and that it will, in the perfectly normal state, take a much more capacious bougie than is commonly supposed, must be recognised by British surgeons ere they can hope to achieve thorough or *radical cures.*

After a large experience in this speciality, I am convinced that *stricture is curable;* but that if the operation of internal urethrotomy is done, it must be done *thoroughly*, bearing in mind the above-mentioned law, otherwise no real cure will be effected.

Medicines and careful mechanical treatment (without actual operation) often suffice however.

W. H. CROWTHER.

, GUILFORD STREET,
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March, 1899

PREFACE TO A FORMER EDITION.

In bringing out a new edition of this little work I can confidently assert that the more cases of stricture I see the more I am convinced of the value of medicine, *properly selected*, in the treatment of the disease.

I have to express my acknowledgments to the following writers :—Druitt, Erichsen, Thompson, Walsham, Henry Smith, B. Hill, and Hughes ; and also to Otis, Keyes, Newman, and Howe, of New York, and to many others.

W. H. C.

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STRICTURE OF THE URETHRA.

STRICTURE: ITS CAUSES, SYMPTOMS, AND RESULTS.

Causes of stricture.

ORGANIC stricture of the pipe (urethra) is generally produced by one of two causes—gonorrhœa and injury. Self-abuse, and lithiasis (tendency to red sand in the urine) are also mentioned as causes. *The incautious use of strong injections* of sulphate of zinc, nitrate of silver (lunar caustic) and other astringents, may, too, have something to answer for in the causation of this common and (in unskilled hands) intractable complaint. Some persons are born with a narrow orifice to the pipe, and this practically constitutes a stricture. **Of all causes gonorrhœa is by far the most frequent.** A man has a gonorrhœa, it is either neglected or improperly treated, the inflammation becomes chronic, and a gleet results. Lymph is deposited under the mucous membrane of the urethra; this organizes, contracts, and thus

A common cause.

diminishes the calibre of the canal. Thus a stricture or narrowing of the pipe is set up, and tends to keep up the gleet by which it was originally caused. Nearly all chronic gleets are followed by (or perhaps, as some would say, result from) contraction of some part or parts of the urethra. From this it will be seen how very important it is that **any discharge from the urethra should receive proper treatment at once.**

Stricture from injury.

Strictures from injuries may be caused by blows or kicks in the crutch (perineum), and venereal or syphilitic ulcers at or near the orifice (meatus) of the pipe may cause subsequent contraction and stricture of that part. Traumatic strictures are usually particularly hard, gristly, and difficult to treat.

Masturbation a cause of stricture.

Stricture may be caused by excessive self-abuse or masturbation, as is proved by the fact that cases occur in young people who have never had sexual intercourse, whose urine is healthy, and who have sustained no accidental injury.

Otis (quoting S. W. Gross) mentions the following: "A druggist, aged 24 years, was brought to me on the 18th of February, 1876, on account of symptoms of vesical irritability under which he had laboured for six years. He had never had sexual intercourse, but had constantly masturbated from boyhood until

his twentieth year. The entire urethra and neck of the bladder were excessively sensitive, and a stricture of the calibre of 17 was detected $6\frac{2}{10}$″ from the meatus. Both epididymes, particularly the right, were enlarged and indurated ; there was no history of venereal disease." H. Thompson says : "Excesses of venery, protracted erections and prolonged intercourse are recognised causes of stricture." Ricord, Lallemand, and other writers also recognise masturbation as a cause of stricture.

Urinary deposits a cause.

With reference to abnormal deposits in the urine as factors in urethral stricture, Otis says : "In regard to lithiasis, or the habitual tendency to the deposit of crystalline material at a higher temperature than that of the blood—the so-called 'uric-acid dyscrasia,' for instance—the habitual passage of uric-acid crystals, commonly known as the 'red-pepper sediment' or the 'brick-dust deposit,' is well known to be frequently associated with an irritable urethra, bleeding easily under the slightest examination, and presenting exceedingly sensitive points, especially when the urethra is naturally thrown into transverse folds, as at the peno-scrotal angle. It is also known that in a very great majority of persons, two or three slight contractions of the urethra are present in the same locality where there has been no acute inflammation caused to which such contractions may be

attributed, and furthermore, it is a well recognised fact that, on the accession of inflammatory urethra trouble from other causes, these points are usually the first to receive accessions of plastic material which result in well marked urethral stricture."

Thompson writes thus : " Urine may possess an irritating quality from the predominance of an acid or an alkali in it ; a persistence of either of these conditions must be recognised as one of the undoubted causes of stricture." And again he says : "The influences of gout and rheumatism are undoubtedly causes of spasmodic stricture : these diatheses, therefore, predispose in this manner to the accession of organic stricture."* Referring to attacks of acidity of urine, Liston says : " Their continuance or frequent occurrence may lay the foundation of disease of the urethra." From these remarks it will be seen how necessary it is to have **thick and cloudy urine, or that showing a tendency to deposit a sediment on standing, properly treated.**

Organic strictures vary considerably in their character. There may be one or more than one in the same urethra ; there may be only a slight

* Sir Benjamin Brodie said that alkaline urine is more likely to produce stricture than that which is acid, and that persons secreting the triple phosphate are almost certain to have stricture sooner or later.

narrowing, or the passage may be so small as to admit the urine in drops merely. Or the stricture may be resilient, and likely to become speedily narrower after dilatation by instruments. This is a very intractible form of the complaint, yet relief may be had. Many surgeons have spoken of "impermeable" strictures; but, as Professor Syme pointed out, it is probable that an aperture, however fine, which will admit urine in one direction will allow of an instrument of some kind passing in another.

Anatomy of the urethra

THE MALE URETHRA is, when not in use, a *closed* channel some 8 inches long. It is divided by anatomists into four portions—the prostatic, membranous, bulbous, and spongy.

The prostatic portion is nearest the bladder and lies in the prostate gland. Stricture never occurs in this portion, but frequently, especially in elderly men, the prostate itself enlarges and presses on the urethra, thus causing narrowing of the canal and symptoms resembling those of true stricture. At the back of this part of the urethra is a ridge called the *veru montanum*, partly dividing the canal into two portions, called the prostatic sinuses, into which the prostatic ducts (through which the prostatic fluid reaches the urethra) open. "In cases of confirmed masturbators," says Dr. J. W. Howe, "all these ducts are immensely increased

in size, and the veru montanum is elongated and hypertrophied to such an extent as to occasionally afford an obstacle to the passage of the sound or bougie, catching on the point of the instrument and very liable to be torn. The sound, in passing over this portion of the canal, also causes intense pain, a point which I regard as diagnostic of onanism or excessive sexual indulgence, except when inflammation of the prostate exists of an acute character." At the posterior of the veru montanum is the *sinus pocularis,* a blind pouch into which open the common ejaculatory ducts (through which the secretion of the testicles flows). The prostatic urethra is about an inch and a quarter long. Affections of the prostate gland will be mentioned on another page.

The membranous portion comes next. It is the narrowest and shortest division, and is about three-quarters of an inch long. The canal in this part has thin walls encircled by involuntary muscular fibres, connected with those of the bladder and prostate. The mucous membrane is often of a reddish colour and is smooth.

The bulbous portion is dilated, and is about an inch long. On the floor of it open the orifices of the ducts of Cowper's glands. These glands secrete a sticky, glutinous fluid, resembling the white of an uncooked egg. This secretion occurs

when there is much sexual excitement, and it is apt to be excessive when the genitals are weakened by self-abuse or excessive sexaulism.

The spongy portion is the longest part of the canal, and measures some 5 inches in length. The pipe increases in size in the *glans penis* and forms the *fossa navicularis*, but at the external orifice, or *meatus*, it contracts again, and is as small as it is at the membranous portion. Along the floor of the urethra are *lacunæ*, or mucous follicles, in which the point of a fine instrument is very apt to catch on its way to the bladder. One large follicle, called the *lacuna magna*, is opposite the fossa navicularis. The mucous membrane of the urethra is smooth and pale.

The urethra is larger than is generally thought.

Very general misapprehension exists regarding the capacity of the urethra. Many *bonâ fide* organic strictures are overlooked from want of knowledge on this head, for the normal dimensions of the pipe are considerably greater than is usually supposed, and it must be remembered, too, that the urethra, like the vagina, is an expansile, elastic canal. "The proportionate relation of the size of the penis to that of the urethra is ascertained to be, as a rule, about as $2\frac{3}{5}$ to 1."* Thus a penis (when in a flaccid state) measuring $2\frac{1}{2}$ inches† in circumference, should take a sound 25 millimètres round,

* Otis. † The English inch about equals 25 millimètres.

and one 3 inches should take a bougie of 30 mm. The exact size of any portion of the urinary canal can be ascertained by means of an instrument called a urethrometer.

It should be remembered that the urethra is a delicate, sensitive passage, which, as a rule, should only be touched in the gentlest way and with the softest possible instruments, instead of having hard and perhaps rough catheters forcibly thrust along it (and sometimes *through* its walls, forming a "false passage"), as was, and is, the custom with the old-fashioned surgeons.

The exact situation of stricture.

Different ideas prevail regarding the most usual SITUATION of stricture. It was formerly held that the membranous portion of the urethra was most frequently affected, but Smith, after examining 98 specimens of stricture in the London Museums, found that the majority of them were in the bulbous portion or a little in front of it. Thompson states that, out of 320 strictures, 215 were at the junction of the spongy and membranous portions (*i.e.*, about the bulb), 51 in the spongy portion, from an inch in front of its commencement to within $2\frac{1}{2}$ inches of the external meatus, and 54 at the external orifice of the urethra, or $2\frac{1}{2}$ inches of it. Quite other "notions," however, come from across the Atlantic. Professor Bevan says that of the strictures examined by him, 89 per cent. were

found in front of a spot 4½ inches from the external meatus. Otis says that, out of 258 strictures, 52 were in the front, ¼ inch from the external meatus; 63 in the following inch—viz., from ¼ to 1¼; 48 from 1¼ to 2¼; 48 from 2¼ to 3¼; 19 from 3¼ to 4¼; 14 from 4¼ to 5¼; 8 from 5¼ to 6¼; 6 from 6¼ to 7¼. I think that this surgeon is right, and that the majority of strictures occur at the front (anterior) portion of the pipe, *i.e.*, at or near the external meatus. The reason of this is obvious, for it is at the first few inches of the pipe that gonorrhœa occurs and strictures are most frequent, as would be expected, "where the inflammation begins the earliest and rages the hottest." Many of the so-called "organic" strictures of the deeper portions of the pipe are in reality spasmodic, and are relieved when their cause (perhaps some narrowing of the anterior part of the urethra) is removed. This fact has a most important bearing upon treatment.

Symptoms of urethral stricture.

THE SYMPTOMS of stricture are well marked. The patient finds that a few drops of water remain in the pipe and dribble from him after he has adjusted his dress; that he has to urinate more frequently than before, particularly at night, and there may be straining, a gleety discharge, a feeling of weakness in the genitals, and itching about the end of the penis; or he may observe that the

stream is smaller than usual, or twisted and scattered, or perhaps that there are two streams instead of one. Constitutional disturbance varies in different cases. Sometimes the obstruction causes irritation of the bladder and kidneys, the urine being less abundant than usual, and the system at large suffers. Sometimes the symptoms are of a nervous character, pain in micturition, with shivering and prostration. Often the complaint comes on in a very insidious manner, and, when the patient seeks advice, he is found to be already suffering from a tight and intractible stricture; indeed, in some cases, the first circumstance that calls his attention to his complaint is the sudden inability to pass water at all. **Gleet** is so important a symptom that it is asserted by a good authority "that **gleet is always dependent upon stricture;** that, while stricture may be present when there is no gleet, whenever there is a gleet (in the sense of a chronic urethral oozing or discharge), an intelligent and thorough exploration with suitable instruments will invariably discover a distinct contraction of the meatus urinarius, or a readily recognised coarctation of the urethra at some point." One form of gleet is often unobserved. It consists of shreds of mucus looking like **little pieces of cotton floating in the urine,** and it can be noticed by putting the water in a

glass vessel and holding it to the light. These cotton-like shreds are most noticeable in the first few drops of urine. They often constitute the earliest sign of stricture. *If, therefore, there is any suspicion of the complaint, or if a person has suffered or is suffering from gleet, skilled aid should be sought at once.*

A patient and his doctor are mistaken.

Occasionally patients are treated for stricture where none exists. R. T., a young tradesman, came all the way from Scotland to see me and to be treated for a supposititious stricture of the urethra. The local doctor had been treating him for stricture with small instruments and experienced considerable difficulty in passing them. On examining the patient I found that his penis was 3 inches in circumference, and that a 30 French instrument entered it easily; *consequently he had no stricture whatever.* The fact was, I presume, that his usual medical attendant, finding that he had some irritation about the urethra, jumped to the conclusion that it was a stricture, and being inexperienced in the use of bougies, he found some impediment either at one of the lacunæ or at the triangular ligament, and this confirmed his idea that the case was one of urethral narrowing.

Another patient came from one of the Midland Counties, where he had been treated for stricture with small instruments, and was told that he would

be always troubled with it, for "once a stricture, always a stricture." His penis was $3\frac{3}{4}$ inches in circumference, and I passed a 38 metal sound into his bladder easily. So far from having a stricture, therefore, his urethra was a capacious one.

The sequelæ of stricture.

THE RESULTS of stricture are to a great extent mechanical, though, of course, constitutional disturbance goes along with them. If left to itself, the stricture becomes more and more contracted, and offers an ever-increasing obstacle to the free exit of the urine. The urethra behind it becomes dilated, and sometimes stony concretions form there; the bladder becomes thickened and diseased, and there is a tendency to the formation of stone in it; the urine may be thick, and deposit a sediment; the patient is troubled with frequent urination (this symptom showing, not that he passes too much water, but that he is unable thoroughly to empty his bladder, for, when a catheter is passed, there will frequently be found some "residual urine" after he thinks he has voided all his water by his natural efforts); the ureters (which convey the urine from the kidneys to the bladder) become dilated, and the kidneys irritated, congested, and otherwise diseased. "Finally," to quote the words of a well-known writer,* "if the complaint is permitted to continue, the health suffers from constant irritation

* Robert Druitt.

and want of sleep; the complexion becomes wan; the appetite fails; the patient complains of chills and flushes, of aching and weakness in the back, and of great languor and depression of spirits, and the urine is constantly loaded with fœtid mucus. The patient finally sinks from irritative fever. After death the urethra behind the stricture is found greatly dilated; the prostate, with its ducts, dilated and suppurating, or sometimes containing small circumscribed abscesses; the bladder sometimes dilated, but more frequently contracted, and enormously thickened—sometimes sacculated from a protrusion of its mucous coat between the fibres of the muscular; the ureters dilated, and converted into subsidiary receptacles for the urine; and the kidneys either greatly dilated or disorganized."

Urethral abscess.

URINARY ABSCESS frequently results from stricture. An abscess forms close to the urethra and opens into it. This is often caused by the urethra ulcerating behind the stricture, and thus allowing a few drops of urine to get into the cellular tissue; this causes inflammation, and an abscess results, which forms a swelling in the crutch (perineum). This ulceration of the urethra is due to the presence of the follicles, previously mentioned, in its mucous membrane. Dittel showed that, in some cases, when death occurred from extravasation of urine, the aperature through which it had escaped

into the cellular tissue was one of these follicles which had ulcerated owing to a diseased state of the pipe, due to stricture and its forerunning inflammation. This diseased state of the mucous membrane of the urethra is shown by the presence of the cotton-like shreds of inspissated mucus, which I formerly mentioned when describing the symptoms of stricture. Sometimes the urethra actually gives way or *bursts* behind the stricture (rupture of the urethra), and allows the urine to run out (extravasation of urine) into the scrotum, perineum and groins, and even as high up the body as the arm-pits. The accident generally happens whilst the patient is straining to empty his bladder. During a violent effort he feels something give way, the painful efforts to pass water cease, he feels better for the moment, and he may even pass some water by the usual passage, as the stricture relaxes when the pressure from behind is taken off. The urine, however, having escaped into the cellular tissue, causes tingling pains, it putrefies, mortification results, and the patient dies unless proper measures are taken for his relief.

Rupture of the urethra.

FISTULA IN THE PERINEUM, or urinary fistula, is an opening from the urethra into the perineum. It is caused by urinary abscess and extravasation. Occasionally a fistula is formed between the urethra and the rectum. This is known by gas fæcal matter escaping through the urethra.

Urinary fistula.

Spasmodic strictures.

Hitherto, organic stricture has been treated of. SPASMODIC and CONGESTIVE STRICTURES must now be mentioned. As generally described, they both complicate prior organic stricture. Spasmodic stricture (sometimes with complete retention) may supervene on a drinking bout, a cold, sexual excesses, &c. Under proper treatment the symptoms may soon subside. In congestive stricture there is a urethritis (inflammation of the mucous membrane of the urethra) with a gleety or mattery discharge. It is a troublesome complaint.

Some surgeons have denied the existence of any spasm of the urethra. Thompson says: "It is an exceedingly useful excuse for incompetence. Spasm may prevent the urine from going outwards, but I do not know that it will prevent an instrument from going in"; and Erichsen writes: "While I would not go so far as that surgeon" (*i.e.*, Thompson) "in declaring that the name (spasmodic stricture) is merely a cloak for want of skill, I confess that I meet with spasmodic strictures less often than when I entered practice, and I believe the same to be the experience of others." With all deference to these gentlemen, however, there can be no doubt that spasmodic strictures of the deeper urethra do occur, and that frequently, and that they then simulate, and are frequently mistaken for, true organic strictures. These latter, apparently,

Spasmodic strictures do exist.

do not often occur in the membranous portion of the urethra, and it is exactly in the neighbourhood of this part of the canal that spasmodic strictures are so common. In support of these views I will mention a few cases. The following occurred in the practice of Dr. G. A. Peters :—F. Whitehead, aged 33. First seen April 20, 1878. Twelve years ago he had gonorrhœa followed by stricture. He was relieved by bougies, and had no trouble until three years ago. There was then gradual decrease in the size and force of the stream, which was twisted. During the past year he urinated only drop by drop. The meatus was divided (but not sufficiently) and internal urethrotomy done, but still a 25 (French) bougie would only pass down for six inches. Beyond this only 15 (French) could be passed. This obstinate and *apparently* organic stricture was thus relieved : a urethrotome was "introduced, dilated to 40 millimètres, and *anterior* strictures divided, when No. 36 (French) passed without any difficulty into the bladder, showing that obstruction at six inches was only spasmodic, and depended on strictures of large calibre and anteriorly." Even what is thought diagnostic of spasmodic stricture—viz., its persistence—occurs in chronic spasmodic strictures. Otis gives the following two cases :—

"J. W., aged 45, presented November, 1874, with

a history of first gonorrhœa 20 years previously, and several subsequent attacks. Five years ago began to have difficulty in passing his urine, stream growing gradually smaller, until, after a debauch, he had complete retention, and was obliged to seek relief. After 36 hours' suffering he was relieved by the passage of a very small flexible catheter in the hands of the surgeon. After this he submitted to treatment by gradual dilatation for several months. He then learned to pass No. 12 (English) soft bougie. From neglect he has had some half-a-dozen attacks of retention during the past year. At last only the smallest instrument could be passed by the military surgeon, and he was advised to go East, and have a radical operation performed, as there were no instruments at the post suitable to operate upon so small a stricture. His habit for a long time has been to pass his water very frequently during the day in a very fine, irregular stream, and several times during the night. Examination: Is of large stature, looking like a strong man who had endured much exposure and hardship. Made his water in my presence, in fine short jets, chiefly dribbling. Circumference of the penis, $3\frac{1}{2}$ inches; size of meatus—23 (French) steel sound passed very easily through a very sensitive urethra to the bulbo-membranous junction, when it was

arrested. Gradually decreasing bougies were introduced, until finally No. 12 (French) passed into the bladder, closely hugged in the deep urethra. Allowing it to remain for a few moments I found it free. I then withdrew it, divided the contracted meatus and stricture, extending for nearly half an inch back, and passed 34 (French) solid steel sound slowly down to the bulbo-membranous junction, when it *slipped by its own weight into the bladder* After the withdrawal of the sound the patient passed his water in a full large stream. From this moment he had no further trouble in urination, passing his water at intervals of six or eight hours during the day, and not at all at night, for the week subsequent to the operation, when he left for his home in the far West, apparently well in every respect."

Another case :—"In February, 1874, I received a letter from a surgeon asking advice as to the propriety of operating with my dilating urethrotome upon a stricture in the membranous urethra. 'The stricture,' he wrote, 'is 7 inches from the meatus. By using a small pointed bougie it can be passed, and then easily dilated to 14 of the English scale. In this condition it has remained for several months. Interference with, and frequency of, urination are his chief troubles. The stricture is, to a great extent, spasmodic,

as sometimes it will hold a small instrument with great firmness. Sometimes I have thought there might be the commencement of a false passage, the difficulty of getting an instrument engaged was so great.' I wrote, suggesting the careful examination for an organic stricture in the anterior portion of the canal, which, by irritation, either from passage of urine or urethral instruments, might cause the deeper trouble. In an answer, a few weeks after, he stated that he had found some contraction at the meatus, and had divided it, but with no effect upon the deeper trouble. May 12 he called with his patient. Examination showed contraction at the meatus not fully divided; 29 (French) only would pass, while the normal urethra was at least 31 (French) in size. Two other strictures were detected at two inches down. Twenty-nine solid steel sound was readily passed to the bulb, and, notwithstanding gentle pressure for several minutes against the face of the stricture, it could not advance. I then divided the stricture at the meatus freely, also the deeper bands, immediately following which a 31 solid sound passed, without the least resistance, into the bladder."

My own experience (by no means inconsiderable) also teaches me that spasm of the deep urethra, so prolonged and obstinate as to be mistaken for organic narrowing, frequently occurs. The urethra

is a muscle, and it may contract in a spasmodic manner like other muscles. This is the reason that a metal instrument will sometimes enter (its weight overcoming the muscular resistance) whilst a gum-elastic one is rejected, and why continued gentle pressure is sometimes necessary before the muscular opposition is tired out, and an entrance into the bladder effected. I have seen cases where one could pass a catheter with the greatest ease, and where shortly afterwards the entrance of the same instrument would (owing to muscular contraction) be prevented. **This obstinate spasmodic action, I have found, is especially liable to occur in those who are subject to an excess of urates in the water.** This spasm does not always occur in the same part of the pipe. The urethral muscle in some cases appears to have the power of throwing itself into violent contraction at almost any part. The following (CASE I.) will illustrate this :

An obstinate case of spasmodic stricture.

Captain H. (an Officer in the Line), aged 46, married, a stout, well-built man, first saw me in September, 1886. Penis $3\frac{1}{2}$ inches in circumference. He complained of stricture, and I found he had a narrow orifice to the pipe. I passed, however, a 23 (French) soft instrument and recommended an operation. On October 2, having had him put under ether, I divided the orifice up to 36 (French gauge); immediately afterwards, after repeated

trials with instruments of all sizes, I found the largest I could pass into the bladder was a very fine bougie (5 French), owing to a violent spasm some 3 inches down the urethra! Prior to this no obstruction had occurred at this point at all, showing therefore that it was muscular contraction. The patient told me afterwards that he himself had noticed in passing instruments that the seat of obstruction seemed to alter, he being able to pass an instrument some days much lower down than on others. I found myself therefore unable to proceed with the operation for the present. On the 4th I had him put deeply under an anæsthetic, and with difficulty I succeeded in passing a dilating urethrotome, and, finding considerable tendency to spasm attacking the urethra, I dilated the whole length of the pipe to 36; even after this I could only pass a 30 metal sound, and that with difficulty, as on trying to pass the full-sized instrument the urethra threw itself into violent contractions at different points. I tied in the 30 instrument. On October 13 I could not pass a 22 soft bougie, but I succeeded in passing a 30, and then a 33, and then a 35 metal instrument easily, thus showing that metal sounds have more power in overcoming spasmodic contraction than the ordinary soft instruments. The patient had a *large deposit of urates in his water*, and to this I attributed the

obstinate and frequently recurring spasm. I put him on medicine to clear the water, and I passed the full-sized sound (No. 35 French) every seven days for some weeks, when his duty called him to India. In the present year (1887) I heard from him, saying that he was all right.

The case of a busy M.P.

CASE II.—Another typical case happened in my practice, in the person of a Member of Parliament, between 60 and 70 years of age. He first wrote to me about the beginning of January, and complained of frequent urination, and of an old-standing stricture, accompanied by spasm. He also told me that he could pass a 7 English, but no larger size. I sent him some medicine to go on with, and recommended him to visit me. On the 25th of February he saw me, and I found him to be a stout, healthy man. He was an abstainer, but had a weakness for pastry and sweet things. On examination I detected some enlargement of the prostate, a tendency to catarrh of the bladder, and a deep-seated stricture, accompanied by *great spasm, which sometimes rendered the urethra all but impassable* by any instrument. Owing to the arduous nature of his duties at the House of Commons and in the Board-rooms of different commercial undertakings, he was unable to lay up even for an hour. Operative measures were, for the present, out of the question therefore, so I

treated him by medicinal applications to the bladder and prostate, and by very gradual dilation with sounds. He did not attend me quite as regularly as could be wished, owing to the numerous calls upon his time, as before explained ; but, in spite of this, I was soon able to expand the stricture, till he took a 14 English catheter, *i.e.*, double the size he had previously been able to pass, and equal to about a 24 instrument, French measurement. The spasm, too, entirely disappeared. The former presence of spasm I attributed to *an excess of urates in the water*, which I successfully combated by medication and dieting.

Dr. Keyes correctly points out that muscular spasm of the deep urethra is not uncommon in people of sensitive, high-strung, nervous organisation, particularly if such be of gouty or rheumatic constitution,* and most especially in those who are sexually astray. He does not think that anterior stricture of large calibre is so common a cause as Otis asserts. Anything like *drinking, or hard riding* on horseback or on a cycle, will make a stricture worse, probably by setting up spasmodic action. This fact was well illustrated by a former patient of mine, Sir H———, an M. F. H,

The case of a master of hounds.

* Persons of this constitution are, of course, particularly subject to deposits of urates or uric acid in the water.

After a hard day's riding he would have a good dinner with champagne, etc., and frequently *this was followed by a complete stoppage* and the passage of a catheter to relieve him was most difficult.

I will discuss the *treatment* of stricture further on.

DISEASES OF THE BLADDER.

Anatomy of the bladder.

THE Bladder is a musculo-membranous sac. The ordinary amount of urine which it contains is about a pint, although it is capable of holding a great deal more. When empty, it is a small sac of triangular shape; when somewhat distended it takes a rounded form, and measures about 5 inches in length and 3 inches across. It has several coats—the peritoneal, muscular, and fibrous; and it is lined with mucous membrane, which is of a pale colour,

and lies in folds, except at the triangular space near the urethra, called the trigone, where it is smooth. This triangular space is very sensitive, and some persons who sleep on the back suffer from incontinence of urine at night, owing to the water irritating this spot; they should therefore learn to sleep on the side, as should also those who are much troubled with nocturnal emissions. The ureters (conveying the water from the kidneys) open obliquely into the bladder at the trigone.

Stone in the bladder.

Of bladder complaints, one of the most formidable is stone. This is a large subject, and can only be very cursorily mentioned. Calculus, or stone, may be differently constituted. The most common are Lithic or Uric Acid, Phosphatic, and Mulberry or Oxalate of Lime, or the stone may be of a mixed character. Stone is especially liable to be set up in persons whose urine deposits gravel or red or whitish matter of any kind. The symptoms of a fully formed stone are irritation or retraction of the testicles, pain in the loins, &c., which is worse on jolting; passage of blood and irritation or pain at the tip of the penis. Stone most frequently occurs in the elderly or the young. It is infrequent in middle age. In children it is usually found amongst those of the poorer classes. In adults, however, it occurs chiefly amongst the well-to-do. The old-fashioned surgeons generally treated stone

by a cutting operation called "lithotomy," but in adults it can be more successfully treated without any cutting whatever.

The usual cause of stone is an improper condition of the urine. It is either too acid or excessively alkaline. For instance, in gouty subjects, the urine is frequently too acid and highly coloured, and a red sand like brick-dust (urates), or sometimes like cayenne pepper (uric acid), may be deposited in it. In phosphatic urine the sediment is generally of a whitish colour. These conditions arise from constitutional tendencies, which must be combated by *medical* treatment. **Bear in mind, therefore, that stone can be removed without cutting, and that the tendency to the formation of calculus can be successfully treated by medicine.**

Inflammation of the bladder

CYSTITIS (inflammation of the bladder) may be caused by the extension of a gonorrhœa backwards to the neck of the bladder, this is frequently due to drink and sexualism ; or the use of instruments may carry the discharge back along the pipe, hence it occasionally happens that in treating a case of stricture some cystitis is set up. Injections meant for the anterior part of the urinary channel may reach the bladder and set up inflammation there, and this is one of the objections to strong urethral injections. Most patients, however, find a difficulty in getting the injection far enough into

the urethra, for this canal is a muscular tube which has a valvular action, admitting and assisting in the flow of fluid outwards, but resisting its going inwards. Still, I have seen men who could easily throw fluid into the bladder with an ordinary glass urethral syringe. To prevent this accident a useful apparatus has been contrived, which I sometimes recommend if urethral injections are used. Cold, gout, stone and stricture are also credited with setting up cystitis, and, with the removal of the cause, the secondary disease will also disappear. The symptoms of cystitis are pain in the perineum and groins, &c., tenderness over the bladder and frequent micturition: the urine being loaded with mucus or matter. When cystitis is *chronic* it is called "catarrh of the bladder." It is a not uncommon complaint, and is a most troublesome one. There is a very *frequent or almost constant desire to pass water*, and the patient's health is gradually worn out from broken rest and irritation. In the hands of the old school of doctors this complaint is frequently quite incurable, and in order to give the sufferer some ease he is drugged with opiates, which do but relieve for the moment, and produce bad effects afterwards by ruining the general health, and thus rendering the unhappy patient less able than before to conquer the disease. The proper and only effectual treatment consists in

Catarrh of the bladder.

exhibiting a few simple medicines and (in chronic cystitis) washing out the bladder, and then injecting suitable medicaments into the viscus by means of a proper apparatus; in other words, **by applying remedies to the diseased part itself.**

Irritability of the bladder may also be caused by worms, by an irritating condition of the urine, and by nervousness, mental agitation, &c.

Other diseases of the bladder.

CANCER, polypus, and a villous vascular growth of the mucous membrane (giving rise to serious hæmorrhage) also occur in the bladder. This viscus, too, may be paralyzed from an injury, &c.; and what is called "ATONY" (want of tone) of the bladder also happens. Sometimes, owing to atony, the patient is unable to pass a single drop of water by the natural effort, and is therefore always obliged to use the catheter. Such cases I treat, not only by medicines, but also by the *direct* application of electricity from a proper battery to the walls of the bladder.

Incontinence and dribbling of urine, it must again be pointed out, happen in most cases, not because the patient passes too much water, but because he can never thoroughly empty his bladder, either from stricture, enlarged prostate, or paralysis of the part.

DISEASES OF THE PROSTATE GLAND.

Anatomy of the prostate

The Prostate is shaped like a chestnut, and is about an inch and a half long. It is situated at the neck of the bladder, has the rectum behind and the urethra passing through it. It is obvious, therefore, that, if it enlarges, it may press both on the bladder and rectum and also diminish the calibre of the urethra, thus causing symptoms resembling those of stricture. The structure of the gland is partly muscular and partly glandular. Its muscular action is partly that of a sphincter of the bladder, and its glands secrete an opaque liquid which dilutes the seminal fluid.

Inflammation of the prostate.

Prostatitis (inflammation of the prostate) may be acute or chronic. It is commonly caused by the extension of a urethritis due to gonorrhœa; or it may be produced by caustic or irritant urethral injections getting too far down the pipe, by the incautious or unskilful use of instruments (bougies, sounds, or catheters), by excessive venereal or alcoholic indulgence, by large doses of copaiba or cubebs, by cold, by masturbation, strictures, &c.

The symptoms are: a frequent desire to urinate, and sometimes also a frequent wish to defecate (when there is nothing in the bowel to come away) and a sense of distension of the rectum. There may also be pain or sense of weight in the crutch, groins, and back. On pressing on the prostate through the rectum, it is found to be tender and perhaps swollen, and the passage of a sound causes pain. A throbbing sensation in the crutch shows threatened suppuration.

Chronic prostatitis may follow the acute form, or be caused by excessive venery or masturbation. This latter is the most frequent factor in producing it. In this complaint there is some tenderness of the prostatic urethra, but the most characteristic symptom is the appearance of a *sticky discharge* from the urethra, *which is especially noticed while the bowels are being evacuated,* or it may be seen after urination. So, too, if a gleet exists, a little discharge may sometimes be squeezed out whilst straining at stool. The discharge when it is from the prostate is also said to be connected with stricture, piles, or other local irritation. It is called *Prostatorrhœa,* and is frequently confused by patients, and sometimes by medical men, with spermatorrhœa. The discharge in the latter disease has a characteristic appearance under the microscope. I will here say a few words about this

Distinction between prostatorrhœa and spermatorrhœa.

Spermatorrhœa: It is a complaint which is possibly not quite so common as is often imagined. It affords a happy hunting-ground for the quacks, who persuade their dupes that they are passing semen in the urine, when perhaps there is nothing unusual there except some slight phosphatic deposit (which may be compatible with health), or even when the urine is quite normal they pretend to detect spermatozoa in it. A protest should also be made against the practice of some surgeons who recommend immoral courses to young men who come to them complaining of emissions. I have seen several cases where loathsome diseases were set up as the result of such most unjustifiable recommendations.

Speaking of spermatorrhœa and impotence, a surgical professor* says:—"These affections having scarcely as yet received that attention on the part of the profession generally that their importance deserves, the unfortunate sufferers from them are too often driven into the hands of those pestilent quacks who flourish in the metropolis and infest almost every town in the country, by whom they are not unfrequently ruined in health as well as in purse. The sexual melancholia that accompanies these conditions is one of their most striking characteristics. The patient is languid in manner, depressed in spirits, his countenance is pale and

* Sir J. E. Erichsen.

haggard, eye dull, expression listless and devoid of all energy. He takes no interest in the ordinary affairs of life ; his whole thoughts are concentrated on his own condition, and he feels himself degraded as being unfit for that duty which is alike the first and lowest duty of man.

"This state of mind is commonly the result of some local irritation or disease reacting on a morbidly sensitive nervous system, and, on examination, the surgeon will commonly find some local condition that has been the starting-point of the mental malady. Balanitis, phimosis, or varicocele in the male, uterine or ovarian irritation, congestion, or disease in the female, are the common occasioning causes. But the most frequent direct exciting cause is undoubtedly that pernicious and disgusting habit, alike destructive of bodily vigour and mental power, which, heedlessly contracted in youth, lays the foundation of an effete and impotent manhood, and for premature senility in the one sex ; and entails hysteria, in its most aggravated and intractable forms, in the other."

Spermatorrhœa has been divided by the celebrated surgeon, Sir John E. Erichsen, into three varieties : — True Spermatorrhœa, or Seminal Flow ; Spasmodic Spermatorrhœa, or Spermaspasmos ; and Asperma, or want of Seminal Secretion. This last will of course cause incurable

impotence, but it is very rare indeed, unless the testicles are atrophied, or absent altogether.

Spermatorrhœa can be satisfactorily treated by proper surgical, medical, and moral means.

It is often necessary to treat some mechanical cause of "spermatorrhœa," such as varicocele (a tortuous and dilated condition of the veins from the testicle) or stricture.

Spermatorrhœa and stricture.

CASE III.—J. S., aged 25, single, came to me complaining of emissions nearly every night; otherwise he said he was all right except for "debility." As he had no varicocele, rupture, piles, worms, bad habits, or any other obvious cause for such frequent losses, I examined his urethra, and *found he had a stricture admitting only a fine French bougie.* Previously he had not the slightest idea he was thus afflicted.

The following is a type of a very frequent class of cases :—

A patient with "nervous debility."

CASE IV.—William S., aged 21, single, said he suffered from "spermatorrhœa," having emissions about twice a week, which caused him considerable mental alarm. With the aid of some much-needed physiological explanations, of some physic to relieve the irritability of the parts, and with directions to withdraw his mind entirely from any contemplation of his sexual apparatus or functions, he soon got better.

This class of patient is often badly treated. He is generally in a very depressed condition, he goes to a surgeon, who pooh-poohs the case; he gets papers, indited by some charlatan, thrust into his hand by a man in the street; the contents of these advertisements frighten him still more, he hastens to see the quack, who promises him an almost miraculous cure; and he comes out of his hands considerably poorer in pocket and in health. Not a few young men have been driven to the verge of insanity by the wiles of these pretended "doctors."

Prostatic enlargement.

CHRONIC ENLARGEMENT OR HYPERTROPHY OF THE PROSTATE is a common affection in elderly men. The swelling may be felt through the rectum, and the catheter discovers an obstruction at the neck of the bladder. The symptoms are difficulty in passing water, **frequent urination,** straining and feeling of weight in the perineum, and the patient may think he has internal piles. He is unable thoroughly to empty his bladder, though he may imagine he does so; the urine left behind decomposes, and sets up irritation and a diseased state of the mucous membrane of the bladder, and stone may be formed.

If the obstruction increases, the bladder and ureters become dilated, the kidneys diseased, and the urine is perpetually dribbling away, or complete retention may ensue. The treatment consists

in attention to the general health, keeping the bladder emptied, and, **by means of local applications, applying suitable remedies to the part affected,** instead of drenching the stomach with all sorts of nasty and possibly injurious mixtures, as is so frequently done.

Other diseases of the prostate are ABSCESS, CANCER, and CALCULI in the gland.

A case of enlarged prostate.

CASE V.—James B., aged 57, married, and has a family. He first saw me on June 9th. He had suffered for a number of years from an *enlarged prostate*, causing the urethra to become tortuous. He thinks he was made worse by an injury to his back in a railway accident some time since. *He could only pass his water in drops* or in a fine stream, and there was a *constant dribbling of urine and desire to make water.* The urine was muddy, and there was considerable pain in the region of the bladder. As he was a stout man, I ordered him an abdominal belt, to remove some of the weight pressing on the bladder. I treated him with small doses of cantharis and other medicines, and also by injecting the part, and I directed him not to discontinue his usual avocations. This treatment was so successful that on the 31st of July he told me that he could now go three or four hours without relieving himself, that he was only disturbed once or twice at night, and that the

dribbling of urine had quite stopped. At this point, feeling himself so much better, I suppose, he unwisely discontinued treatment.

Another case of hypertrophied prostate.

Another (CASE VI.) rather elderly man, a Government clerk, whom I will call X. Y. *Z.*, came complaining that he was very frequently troubled to pass water both by night and by day, and that *he could not hold his urine*, it was constantly leaking away and wetting his clothes. So bad was his complaint that it seriously interfered with his duties, and he had on several occasions received leave of absence in order that he might have treatment. Nothing, however, besides the giving of medicines, which did not relieve, appears to have been done for him. When he came to me I found that *the bladder contained a very large quantity of water which he could not pass by any effort he could make*, and therefore, of course, he was always being troubled to urinate, and by the water escaping in the way mentioned. As soon as the bladder was thoroughly empty he felt great relief. His troubles were caused by an hypertrophied prostate pressing on the neck of the bladder. The enlarged gland could easily be felt through the rectum. Similar cases are quite common.

TREATMENT OF STRICTURE.

Were I to assert that stricture can be most materially benefited by medicine only, I think I should have a large majority of the profession against me. Nevertheless, I believe that the statement is a correct one. Medicines in stricture.

As is well known, there are two great systems of medicine, the Old (miscalled Allopathy) and the New, the adherents of which usually call it Homœopathy. There also exists what is called the water-cure, or Hydropathy, which is more or less used both by the allopaths and homœopaths. Allopathy and Homœopathy.

The allopathists assert that the homœopathists are quacks or fanatics, who simply give their patients sweetmeats; whilst the homœopathists retaliate by attributing to their opponents an irrational and obstinate conservatism which prevents their impartially examining the method of Hahnemann. The fact is there is truth on both sides. Allopathy rightly does not refuse any medicines which palliate, even if they will not effect a cure; whilst homœopathy has undoubtedly cured many cases which were quite untouched by the old-fashioned system of pouring oceans of

nasty medicines into the unhappy patient. Whoever has seen acute fever, with hot skin and full-bounding pulse, treated with minute doses of aconite, or some forms of lung affection with an exceedingly small exhibition of phosphorus, will not doubt there is "something in" the homœopathic system. The custom of giving drugs needlessly has brought the great and noble science of medicine into contempt. Indeed, it has been described as "the art of pouring drugs, of which we know little, into the human body, of which we know less." The homœopathic system has at its command a very much larger number of drugs than the old-fashioned or "orthodox" school, and each of these drugs has been carefully "proved" on the human subject; in other words, physicians of the new school carefully try the effects of drugs on themselves and their friends before administering them to the sick—in fact, they experiment on themselves, not on their patients. Homœopathy has, too, the undoubted advantage of having a definite rule for the selection of drugs instead of prescribing haphazard or by rule of thumb; but it has the disadvantage, in the hands of some of its most earnest professors, of being mixed up with a sort of spiritualism and with practically impossible attenuations or "potencies" of medicines.

An amalgamation of different schools suggested.

Why cannot the two systems be amalgamated? The leaders of the old school have recently adopted some of the peculiarities of homœopathy by giving minute doses of medicine and by using many of the drugs recommended for years by it in certain cases. If homœopathy were to drop its sectarian characteristics, it is probable that many more of its doctrines and provings would be accepted by the mass of the profession.

A law of therapeutic action.

The following is the rule which the author believes to be always, or nearly always, true, viz., that **large and small doses of a drug have opposite actions**; in other words, that if a drug in large or poisonous doses will produce symptoms closely resembling those of a certain disease, it will in smaller doses tend to cure that disease when it (the disease) has been set up by natural causes. For instance, arsenic will produce eruptions resembling certain skin diseases. In minute doses it is generally recognised as the best medicine for the cure of those affections. The rule I have laid down will, I am sure, be accepted by homœopaths, and "allopaths" will also, I think, concede that it is at any rate frequently true. Even the *Lancet*, a somewhat intolerant upholder of so-called medical orthodoxy, admits this.

Unfortunately, this rule is seldom consciously acted upon; but, if it were made their guiding star

by the mass of the profession, whilst **not neglecting proper antiseptic and electric treatment** when needed, and those palliative means (both old and new) which now form the bulk of the remedies generally adopted, a happy time would arrive for suffering mankind.

The author adopts this theory as the basis of his practice, and has found it most serviceable in the treatment, not only of acute, but of many chronic and so-called "incurable" cases.

It is, of course, in spasmodic strictures that the action of medicines is most marked; but it is also very observable in organic strictures. For instance, I have seen organic strictures where it was impossible, even after prolonged and careful trials, to pass the very finest instrument, after a short course of medicine, and *without rest or chloroform*, yield so as to allow a small bougie to enter.

A case where medicine did good.

CASE VII.—Constable S. had attended at the Westminster Hospital out-patient department for a considerable time, but, as the surgeon could pass no instrument after repeated trials, he was recommended to enter "the house." This, however, he objected to. He came to me, and after several trials I was almost in despair of being able to insert an instrument. I tried him with clematis, but it was of no use. I then put him on aconitum napellus, and was soon able to pass No. 1 (English)

catheter. The treatment of the case after this was easy.

In spasmodic cases the value of drugs is, as I said before, most marked.

Another cas of medicina treatment

CASE VIII.—Mr. B., a tradesman from Bath, consulted me regarding himself. He had a narrow meatus and an enlarged prostate, also some stony concretions almost occluding the pipe, and accompanied by a good deal of spasm. To start with, I used no instrumentation, but supplied him with drugs selected in accordance with the law of similars. After using them for a time, he passed water so freely and in such a large stream, compared with the former one, that he thought he was quite cured, though of course the stony matter remained in its position as before.

In some cases of stricture any operation is quite out of the question, either on account of the positive refusal of the patient or his friends, or from his inability to lay up. The following is such a one :—

A patient who could n be operated upon.

CASE IX.—G. Gould, a middle-aged married man, living in a country town, first came under my notice on March 8, 1884, by writing to me. He described himself as broken in health owing to a long-standing stricture. He had been under several local practitioners. He could only pass No. 4 (English) catheter. I recommended him to come

and stay in London, and at the same time sent him some powders appropriate to his condition. These powders did him good, and he wrote that, though he was utterly unable to come and stay in London, yet he would run up for the day and see me. This he did. I found he had a very old, tough, and gristly stricture, his general health was bad, his urine stinking and muddy (showing commencing disease of the bladder), and his efforts to pass instruments appeared only to irritate the parts more. I advised him to persevere with the powders and to tie in No. 4 catheter for 24 hours. This he consented to do. *This was the only occasion on which I saw him*, and, as he could not manage to come to London again, I treated him through the post. On April 30 he writes he can pass No. 6 (English) after using No. 5. I recommended him to use tepid applications to the bladder in the way I described to him. These applications rendered the water clearer. On May 26 he wrote he could pass No. 7; on June 16 he could pass No. 8—"more," he writes, "than any surgeon has been able to do for me for nearly twelve years." On June 28 he passed No. 9 (English), though with some difficulty, and he then went into the country to stay for a time. I recommended him not to use any force in passing the catheters. On October 27 he gratefully writes:

"My water passes quite freely now, and that is a great blessing, I can assure you. I have not been able to pass my water so freely for years." The medicines I treated this case with were, according to the predominant symptoms, either cantharides, aconitum nap., or cinchona, &c., all of course in small doses.

A case treated with medicines.

CASE X.—This shows what can be done by medicine only, after catheters have failed to relieve. *I have never seen this patient* (Henry H., aged 43), but he wrote to me (June 10, 1883) from the Isle of Wight, saying he had spasmodic stricture, that he had been under treatment for a long time, and that instruments only relieved him for a short time, and often made him worse. He says in his letter that he only passes his water four times a day when he is well, but when the passage contracts much oftener. Sometimes his water was clear, sometimes thick, especially if he had a cold or had over-exerted himself. He complained of soreness and throbbing in the pipe behind the testicles, and a difficulty in passing water. On receipt of these symptoms I sent him medicine by post, and recommended him to discontinue instruments for the present. The relief which a few supplies caused him may be judged by the following extract from a letter (July 7, 1885) of his to me:—"After suffering for 18 years from stricture of the urinary

passage, with burning and throbbing sensation, I wrote you, and under your skilful treatment and system of medicine I am pleased to say I am much better. Although I have only been under you a short time, and you have never seen me, you have done me more good than all the doctors I have been to. They all told me I should never be any better. I have had seven different doctors." On July 18, however, he had relapsed a little, and he sent for more medicine. On and off I had him under treatment till the end of the year. I have only heard from him twice since, the last time being in answer to a letter of mine inquiring if he was still well. In reply he wrote a most grateful letter. I cannot quote it here, but it will be sufficient to say that, in very thankful terms, he described himself as being still well.

Another case where medicine only did good.

CASE XI.—Charles L., aged 37, married, after attending some time at a hospital (where he had the urethra divided), came to me at the end of March. He had no very serious lesion, but he complained a great deal of a hot inflammatory feeling in the urethra, which compelled him to urinate every half hour or so. There was no discharge from the pipe, and the urine was clear. This constant desire to micturate soon passed off under very *minute* doses of Spanish-fly (which in *substantial* doses will cause similar symptoms), but

some burning pain in the pipe still remained. This was treated with some tinct. belladonnæ, and he soon declared himself quite well.

A patient discontinues instruments and takes medicine.

CASE XII.—F. M., aged 34. *I never saw this patient.* He had long been treating himself with instruments, and when he wrote to me he was using No. 9 (English) catheter with difficulty. He afterwards wrote to me most enthusiastically regarding the action of *medicines only* in this case. Amongst other things he says: "At last I have found time to write to you to let you know how I am getting on. Your medicine has been a perfect success in my case; it has effected a perfect cure.* I feel better than I have for years." In his first letter to me he had complained of stricture and of pain in urinating.

Gleet and its treatment.

Before discussing the instrumental treatment of stricture, I will again mention GLEET and the dangers of the incautious use of strong injections into the urethra, especially when applied with an improper apparatus. Nothing is more common than to attempt to relieve gleet by this means. *I will not say that injections are without their value,* but they must be carefully used and under skilled attention. Without precautions they may cause cystitis, or epididymitis and swollen testicle. Old-standing gleets appear generally to be due to a

* The author doubts if it was a *perfect* cure, although of course the patient felt great relief from the medicines.

certain amount of contraction (no matter how slight) of some part or parts of the urethral canal, and the destruction of the stricture or strictures constitutes the *treatment of gleet.* **Few people know how common gleets are,** how patients have them for years, how the sufferer runs about from doctor to doctor, tries one system of treatment after another, including advertised "infallible remedies," the use of tonics, of injections, of bougies, of cauterization, and the rest of it; but the gleet remains in spite of all, and persists in remaining *until the stricture is removed.** The existence of a contracted meatus—either congenital or acquired—is often sufficient to keep up a gleet, and on this contraction being relieved the gleet has a fair chance of getting well, assuming there is no other stricture lower down.

A medical patient.

CASE XIII.—Dr. W., a medical graduate, of Edinburgh, consulted me about a slight gleet which he had had for some time. There were shreds in the urine, and a slight discharge from the urethra was seen from time to time. Being a medical man himself, he naturally had what he and other doctors

* Gleet causes a diseased *granular* condition of the mucous membrane of the urethra. In some cases of gleet and slight stricture, the only symptom noticed by the patient is a sense of *wetness in the pipe.* An instrument called a urethrascope, and illuminated by the electric light, is sometimes used for seeing the granular condition of the urethra.

thought the best treatment, but still *he did not get well*. He called upon me to ascertain what was the reason of his being unable to get rid of this annoyance. On examination I discovered a narrowing of 7 millimètres at the meatus, and I explained to him that it was the existence of this slight stricture which had prevented all the treatment he had undergone being successful.

Instrumental treatment.

The usual *instrumental treatment* of stricture is by bougies, sounds, or catheters. These may be made of metal or other softer substances. The latter are generally preferable, perhaps. A great deal of mischief may be done by bungling attempts to pass metallic or the usual hard gum-elastic English instruments. The English sizes usually run from 1 to 12, but the No. 12, for instance, of one instrument-maker is not necessarily the same size as the No. 12 of another maker. The best gauge to use is the French. On this the numbers run from 1 to 40, and the sizes are uniform; a No. 1 instrument being 1 millimètre in size, a No. 2 measuring 2 millimètres, and so on. A No. 10 of the usual English scale is a little smaller than No. 20 of the French. The French instruments have the additional advantage of starting with a much smaller and ending with a much larger size than the English.

Different sorts of bougies.

The dilation of strictures.

The usual method of treating organic strictures is by *gradual dilation.* A sound or catheter small enough to go through the constriction is passed ; a day or two afterwards a larger size can be introduced, and the process should be continued until the stricture is expanded to the full size. It may be pointed out that, in skilled hands, the passage of a soft flexible instrument usually **causes nothing that can be called pain.**

Continuous dilation is a modification of the preceding, and is a more rapid process. A small instrument is passed and fastened in for from 12 to 24 hours or longer ; this dilates the stricture, and as soon as the first is withdrawn a larger one is passed. This process should not be kept up too long, and under any circumstances it may set up cystitis, but nevertheless it is a very useful method in some cases.

Rupture, or forcible expansion, of the stricture has been advocated. Several surgeons—Perrève, Holt, Thompson, Hill, &c.—have introduced instruments for splitting strictures.

Keeping the bladder constantly drained by means of an artificial opening into it. No urine at all is allowed to pass through the urethra, and the complete rest and freedom from irritation thus obtained are often of great service in otherwise intractable cases of stricture.

Electrolysis may, in some cases, be used with the idea of destroying the abnormal thickening of the urethra. Where likely to be of service I should use it. Its value, however, appears to have been exaggerated. Dr. E. L. Keyes (an eminent authority) has gone thoroughly into the evidence. He thus sums up :—"Electrolysis with a very mild current—I prefer to put it at less than two milliampères—does no harm ; in fact, does nothing that I can appreciate, and does not interfere with the benefit to be derived from ordinary dilation. I believe that a strong current is full of danger, both immediately from irritating effect, and ultimately from cicatricial effect, and that employment of the negative pole does not prevent this. My study of the subject, and the experience it has brought me, digested with all the impartiality I possess, lead me to state, that the allegation that electricity, however employed, is able to remove organic stricture radically, lacks the requirement of demonstration. The confidence of its advocates that it will radically cure organic stricture is, in my opinion, due either to the combined credulity of the patient, and imagination of the surgeon, or to some special but fortuitous act of Providence, upon the co-operation of which, in the case of his own patients, the general practitioner cannot with any confidence rely."

An expert's opinion of electrolysis in stricture.

He further says:—"I turned to Dr. Newman, of New York, who is 'the apostle of this creed,' and who alleges that he has radically cured 200 cases or thereabouts of stricture by its use, and asked him for instruction and his co-operation in my investigation of the subject, which I assured him was honest, stating that if my results justified his assertions, I would advocate the method and advise its use generally. Dr. Newman kindly accepted the proposition, sent me his pamphlets, and assured me that following his rules would convince me of their truth, and accepted from me a dispensary patient to treat, that I might personally verify the result obtained by himself. I therefore procured from various dispensaries seven pronounced typical cases of urethral stricture; three of these I treated personally, with all the ability I possessed, commencing in January, 1888, following Dr. Newman's rules as closely as I was able. Three patients I turned over to my assistant, Dr. E. Fuller, who treated them independently, fortified with extra knowledge gained by personal observation of Dr. Newman's operative method as practised by himself (one case of urethral spasm was also treated by Dr. Fuller). The seventh case was sent to Dr. Newman, who received the patient kindly, and treated him about once a week from February 6th until June 27th—nearly five months.

My assistant Dr. Fuller (once Dr Garrison) always accompanied this patient on his visits to Dr. Newman, and immediately upon leaving him wrote down in a case-book what had happened during the interview. One other case previously treated came to me, and out of this material I propose to construct my report."

He goes on to say that he carried out Newman's instructions carefully, but that even Dr. Newman's own case did not progress under the treatment. "As for my own several test cases, I may summarise them by saying that in *no instance did any more benefit appear from the electricity than could have been obtained by ordinary dilatation;* that most positive failure of cure must be reported for all; that pain, local inflammation, putting the patient to bed, and threatened perineal abscess must be noted as among the complications of treatment; that relapse as to recontraction of the stricture was found in all the cases tested, after a moderate interval, being most marked, however, in the case of the patient treated by Dr. Newman for me. For his sake I regret this fact, since he was most kindly in his efforts to help my study, and I regret that his patient at least did not have a better fate."

Dangers of electrolysis

Electrolysis in stricture has been a good deal mentioned, but the facts remain that, after the evidence in its favour has been weighed, it is not

adopted by the best known specialists, either in this country or abroad, and that it has dangers of its own. For instance, there is some risk of hæmorrhage with this electrical treatment; and even the advocates of electrolysis admit that in tough strictures they have to use the electric cautery—*i.e.*, **a piece of metal heated to yellow or white heat applied to the urethra.** Is not this a *most severe* treatment? Besides, it is well known that the cicatrix or scar following a burn is very apt to contract, and thus in after life the stricture might become even tighter than it was before such treatment.

Severe and dangerous applications of electricity have been advocated by some.

As I said before, however, I should use electrolysis where it was likely to be of service, but I cannot recommend such very heroic treatment as the electric cautery.

Over-distention—i.e., expanding the strictured urethra with bougies or dilating instruments beyond its normal size—may be of advantage in some cases.

Caustics. — The destruction of strictures by potassa fusa and other caustics has been attempted. The practice seems now exploded.

External urethrotomy, or the division of the stricture from without, was introduced by Syme. It is a cutting operation, and, as a rule, it appears hardly an advisable one.

Internal urethrotomy is usually the best and

most satisfactory operation for the radical cure of stricture; it has the advantage of not being a serious one, and it can be rendered quite painless.

The best operation for a radical cure.

There are many cases which can only be satisfactorily treated by operation, and in these the author recommends the *new* method of internal urethrotomy as being the most satisfactory, and, in the long run, the least severe of the different processes adopted by surgeons. The reason that so many operations for the cure of stricture fail is that the urethra is not expanded to its full calibre along its whole length. It must never be forgotten that there is a fixed relationship between the circumference of the penis and that of the urethra; for instance, a penis, when flaccid, measuring 3 inches round, should take an instrument 30 millimètres in circumference. Not long since I saw a patient who had been operated on at a hospital at the West End of London and who was discharged "cured." The man's urethra would only take a 15 (French) instrument when it ought to have taken a 30! In a short time the probability is he will be as bad again or worse than ever.

The operation is not a risky one.

The operation as I perform it is **not** what is commonly called a **cutting operation,** no incision being seen at all. In the hands of an experienced surgeon it is **not what may be called a dangerous operation,** and there is generally but **very little hæmorrhage.**

The advantages of this operation may be summed up as follows :—

(1) It leaves less urethral cicatrix than any other operation, and therefore there is less room for after contraction.

(2) It is *not* what is called a *cutting* or a dangerous operation, and there is *very little hæmorrhage* as a rule.

(3) That it can easily be made *painless.*

(4) That it puts the urethra to its *full size along its whole length.*

(5) That it requires only a *short course of treatment.*

(6) That it is *less dangerous* than other methods

The treatment of contracted urinary orifice and and gleet,

Division of the external meatus to its full size is a very trifling operation indeed, and it is sometimes **sufficient to cure** the patient of stricture lower down, which appears to be organic, but which is in reality spasmodic. How many patients have suffered grievously from false passages made by the attempts to pass instruments through these spasmodic strictures ! It must have been frequently noticed how long those persons who have a small orifice to the pipe (either congenital or acquired) suffer from gleet. This little operation is frequently sufficient to cure the gleet, and thus to prevent the tendency to the formation of organic strictures lower down the pipe. The patient is able to get

about in a very short time after the operation; indeed, it is hardly necessary for him to "lay up" at all, or at any rate for more than a day or two.

Another little operation (hardly worthy of the name) is sometimes advisable in stricture cases—viz., that for the relief of a long or tight foreskin (prepuce) which will not go back (phimosis.) A prepuce of this sort is a constant source of irritation, not to mention other disadvantages. I recently saw a case of a young man whose foreskin was so contracted over the nut (glans penis) as to cause what was almost tantamount to a stricture. He could only get rid of his water in a fine stream, and the urine, getting between the prepuce and the glans, expanded the former like a bladder. A slight operation set him right. I have seen other persons troubled in the same way.

Phimosis.

CASE XIV.—T. D., a printer, suffered from phimosis; his foreskin had always been rather a long and tight one, but since he had had a gonorrhœa he had been unable to get it back at all, and, as he intended getting married, he thought this might be an impediment. He said he did not care about taking ether, so, to render the little operation for the uncovering of the nut practically painless, some ten minutes before I commenced I injected the part subcutaneously with a few drops of a

Cocaine in minor operations.

solution of the new local anæsthetic *cocaine*, the active principle of coca, a plant chewed by the aborigines in South America. It acted very well; the patient told me he felt almost nothing of the operation, and he experienced no bad symptoms whatever. Cocaine is now used locally in many minor operations. It renders the part where it is applied partly or completely insensible, and I frequently use it in urethral surgery.

I will now mention a few more cases of stricture out of the many hundreds I have treated, and I shall sometimes (as in former cases) venture to quote the words of the patients themselves regarding the relief they have found.

A case of syphilis and urethral stricture

CASE XV. exhibits a complication of maladies. The patient, W. M., came to me in February. He was 44 years of age and unmarried. He had had syphilis from the age of 19, and was deeply infected with constitutional symptoms. He had, as common in such cases, been treated with too much mercury. He was passing his urine in drops or in a fine stream, owing to an old-standing and narrow stricture. So narrow was it that No. 1 catheter could only be passed with great difficulty, and was tightly clasped. He was also passing large quantities of stony matter (phosphates), which, he said, sometimes came away in pieces which stopped the passage altogether for a time.

Instruments, increasing in size, were passed each time he came, and in a fortnight the stricture was relieved, which result was much accelerated by medicines selected in accordance with the rule laid down. He then went to Lichfield to work at the reredos in the cathedral, and I continued to supply him with medicines appropriate to his constitutional state. On his return his urine was clear, the stream of water passed as well and as easily as ever it did, and his symptoms of constitutional syphilis were much relieved. The discharge also which accompanied his stricture was no longer noticed.

He wrote to the author on March 5, thanking him "for the *painless* operations attendant on my having had stricture for some time, causing the bladder to be affected, and accumulations of stony matter," and he goes on to mention his speedy relief *without his having to stay away from his ordinary occupation for a single day.*

A case of urethral stricture and of piles.

CASE XVI.—Henry B., of Enfield, aged 36, and married, had been troubled with his water passage for some time. He urinated with difficulty, had a throbbing pain in passing his motions (caused by piles), and also suffered from constipation, which he had made more obstinate by taking pills and purgatives. On one occasion he had suffered from complete retention of urine, and was treated at the London Hospital, where he endured great pain

from the attempts made to pass an instrument. He had to take chloroform before they could relieve him by drawing off the water. He saw me in April, 1883, and a soft bougie, No. 6 (French), was passed with difficulty, but without pain. In a few weeks, however, under the treatment adopted, he felt well, he said, and passed his water freely. A good sized French bougie entered easily. He writes as follows: "Having been afflicted with stricture for the last five years, being unable to pass my water freely, and having been under various doctors and attended the London Hospital without success, I thought I would try your system, and am pleased to say that my passage is now as free as ever it was. I am much obliged for the skilful way in which you have treated me, and am gratified with the rapidity of my cure." In another month's time, *without cutting* or other operation, he was, *by medicine only, cured of his piles and constipation*, and wrote to me as follows: "After suffering some time from piles . . . . and attending you for a short time, you have effectually cured me by a few simple medicines, without cutting or having to stay from my employment." About two years afterwards (March, 1885) he wrote again, saying he was still quite well, and has required no further treatment.

CASE XVII.—George A., aged 39, married,

A case of dilation with bougies.

came to me on March 12, 1883. He had been attended by different doctors for a difficulty in passing water; he had plenty of medicine given him (which did him no good, he said), but no one, except the assistant of one medical man, attempted to relieve him with the catheter. This sensible youth endeavoured to pass an instrument, but was unable to do so.

When I first saw the patient he had considerable difficulty with his water. He passed it with great straining and in a very fine stream. No. 1 was, with patience, introduced on March 12, No. 7 (French) on March 17, No. 15 on the 18th, and so on. This rapid expansion was aided by medicines selected by the rule I have laid down. Although the stricture was thus dilated, he still suffered from a discharge. In eight or ten days this also disappeared. He has had no return of his troubles (September), and he testifies in grateful language to his rapid recovery. He writes: "I had been attended for about nine months by different doctors, none of whom did me any good, and I could scarcely pass water at all, but under your treatment—without pain, loss of employment, or inconvenience—I am able to pass water as well and as freely as ever I could."

The above three cases are examples of mechanical dilation aided by medicines. It must not, how-

ever, be supposed that all strictures yield so rapidly. When a stricture has once been dilated or operated on and has gone back again, it is more difficult to dilate again, and it takes a considerably longer time. In some cases, too, owing to a tortuous condition of the urethra, it may take some time before an instrument can be passed at all.*

The importance of putting the meatus urinarius to its full size.

In the treatment of all cases of stricture and other urinary diseases it is of great importance to relieve any constriction of the external urinary orifice (meatus). This little proceeding (as has been said previously) is often sufficient, without any further operation, to cure the stricture and its accompanying gleet. So long ago as 1850 Civiale pointed out this fact, although even now it is very generally unknown or ignored. He says: "That which has struck me most forcibly in dividing a meatus, often only slightly contracted, is the sudden and complete change effected in the general condition of the patient. The constriction, which seemed hardly to impede the flow of urine, is no sooner divided than all morbid symptoms vanish—the urethral walls, which were rigid, hard, and inelastic, immediately recover their normal condition. The bougie, which at first passed only with difficulty and pain, slips into the bladder with ease, ... and the patient finds himself in a

* See Case VII., p. 50.

state so satisfactory that it would be incredible but for the fact that the instances are again and again repeated. An effect so prompt, through means of which the significance is plain, shows that the slightest obstruction in the urethra is liable to produce the gravest symptoms, local and general." Even when an attempt is made to increase the size of the orifice it is often not fully expanded to its proper capacity, and it therefore fails in affording perfect relief.

A case of phimosis and stricture treated by operation.

CASE XVIII.—A gentleman from Lancashire consulted me about a tight prepuce that would not go back (phimosis), and a stricture. I could only pass a comparatively small instrument—15 (French). His penis in the flaccid state was 3 inches in circumference. He wished for a speedy cure, and I recommended a slight operation. Ether having been given, I first operated on the foreskin so as to uncover the glans penis, and then increased the size of the meatus until it took No. 30 (French). At the time of the operation, however, I could not pass this size bougie right into the bladder, for it was stopped by a stricture some 5 inches down. Judging this obstruction to be spasmodic in character, I left it alone, and within a few days was able to pass No. 30 quite into the bladder.

CASE XIX.—Mr. C., aged 35 (married, and with a family), a tradesman from Essex, consulted me

Gleet in a married man.

June 17, 1885, for a thick gleet, which he had had for a considerable time. He was a healthy man in every other way, and he assured me most positively that he had never committed himself with any strange female in his life, either before or after marriage. I could only therefore attribute his gleet to the fact of his wife having a good deal of leucorrhœa, or "the whites," as it is called. I treated him with medicines and a mild injection, until there was a marked improvement in the character of the discharge; still, after a fair trial of medicinal treatment, *it did not stop altogether*, so I examined him for stricture with the urethrometer, and detected two slight narrowings, one at the orifice, and one $5\frac{1}{2}$ inches down. To set this right I recommended a little operation, and on September 10 I nicked the meatus with a *bistouri caché* until it took a 32 French instrument. After this I found that the narrowing lower down had disappeared, and I was enabled to pass a full-sized sound into the bladder without any further operation. A day or two afterwards he returned to his business, but he came occasionally for some weeks afterwards, for me to pass an instrument so as to keep the part freely open. I followed up this treatment with a little mild injection, and then discharged him perfectly cured; so much so that, acting on my advice, he was enabled to insure his

life on the ordinary terms, although the medical examiner inquired particularly as to this very complaint.

I now quote the following cases of internal urethrotomy from amongst the notes of the operations I have recently performed for the radical cure of strictured urethras. The operation I adopt is not likely to be followed by any alarming symptoms. *I have never had a case where dangerous symptoms have occurred.* This operation is not the *usual* one of internal urethrotomy, but is founded on the one adopted by Otis. As usually performed, internal urethrotomy is not a permanent cure for stricture, but the process I am referring to claims to be, if thoroughly carried out, really a *radical cure* of the complaint.

The patient had led a rackety life.

CASE XX.—E. B., aged 35, single, consulted me on November 21. He was a rather flabby, unhealthy-looking man, having led a "hard life" in one of the colonies, both as regards drink and exposure, and, in addition to all this, he had suffered from rheumatic fever, from malarial fever, and from syphilis. Apparently, therefore, he was not a very good subject for any operative proceedings. He was anxious, however, to get well quickly, in order that he might be fit to go abroad again, and he had already consulted several London doctors without obtaining a cure. On my first

examination I found that the penis was 3¼ inches in circumference, and that there was a hard gristly stricture some few inches down the pipe (through which I could only pass a 19 French bougie), and that the orifice was contracted. There was a thick discharge, and he was troubled by frequent erections and emissions. I directed him to attend me regularly two or three times a week, and gave him some medicine to relieve the irritability of the genitals. By December 2 I had dilated the stricture so that it took a 25 French instrument, and I then requested him to come in for the operation. This he did on December 11. In operating (having first had him put under an anæsthetic) I began by increasing the meatus to its full size, and proceeded, with Otis' urethrotome, to expand the stricture at 3½ inches down to 34 millimètres (*i.e.*, two millimètres larger than the normal capacity), and then I incised it with the little hidden blade in the instrument. The operation was not followed by a bad symptom, although, as I said before, he had led a rackety life. The meatus was kept open with a piece of oiled lint, and a 34 instrument was passed for some weeks. He of course suffered no pain during the operation, as he was under an anæsthetic, and, indeed, where the patient does not take either ether or chloroform, the amount of pain is surprisingly little. Some time afterwards

The case was treated by Otis' operation.

Mr. E. B. told me that he was still quite well. The amount of laying up in this case was very short, for he was only confined to the house for about a week, and in some cases I have kept the patient in bed for even a shorter time than that.

An obstinate case.

CASE XXI.—Mr. M., aged 41, a widower, wrote to me saying that he had a stricture and a frequent desire to pass water. As he could not see me, I sent him advice and medicine by post, and told him to endeavour to pass a fine instrument himself. The stream of water increased in size under the medicine, but he could not succeed in passing any instrument at all, however fine. Some years previously he had been able to pass a No. 6 English catheter himself, but for the last two years neither he himself nor his doctor in Manchester could pass any instrument whatever into the bladder, although the medical man had put him under chloroform and then tried. On ascertaining these facts, I most strongly urged him to come and see me, and this he did. I found him a short, thick-set, healthy and very muscular man, and one who had always been a temperate liver. Penis $3\frac{1}{2}$ inches in circumference. After the most careful and persevering efforts, I failed to pass any bougie at all of any sort or any size, owing to an obstruction some 6 inches down. This being the case, I recommended him to come in, which he did. I divided

the orifice up to 35 millimètres; directly after this I could not pass any instrument more than 2 inches down, owing to a strong muscular contraction or spasm of the urethral muscles at that point. Prior to this, the first obstruction a small instrument met with was about 6 inches down the urethra. So far, then, I had failed to do much good, and, to complete my disappointment, he had now to go to Manchester on business. On his return a fortnight afterwards I had him put under chloroform, of which he took a very large quantity before he became unconscious; he seemed to fight against the drug. When at last he was fully insensible I could still pass no instrument. "Altogether a difficult subject to deal with," I began to think. "Put him still more deeply under the anæsthetic," I said to the chloroformist, and this he did. Finally, to my delight, whilst he was most profoundly and fully under the drug, the spasm relaxed, and I succeeded in passing a small instrument. The next day, on trying to pass the same instrument, I failed again, and had to put him under chloroform a second time. I then got it in, and succeeded in passing one instrument after another until I got up to a 6 English catheter, which I tied in. On withdrawing this the next day, I passed a 9 English catheter, which I also tied in for twenty-four hours. Afterwards an 11 English catheter entered, and

Violent spasm.

this I was also compelled to fasten in, as, like the previous instruments, it was so tightly clasped. The next morning I put in a 30 solid metal instrument, and I then proceeded to examine with the urethrameter*—an instrument which I had been previously unable to use owing to the strong contraction of the urethra which it produced. By its means I detected a slight narrowing some 3 inches down, and also that the meatus had not been divided quite up to its full size, or else had again contracted a little. This remaining narrowing of the orifice I rectified, and then went on to expand the deeper stricture with the dilating urethrotome, after which operation I passed a 36 solid steel bougie. The patient was most grateful, for he had begun to despair of ever getting rid of his trouble, and I myself felt somewhat elated, for I have seldom seen a case where there was so strong a spasmodic action of the urethra. The urethral muscle seemed to have the power of contracting and opposing the entrance of a bougie at any part of the pipe where it was irritated.

The full-sized instrument was used for some time after the operation, and always entered easily and without meeting with any obstruction. I have

* Otis' urethrameter, I find, is not always quite a reliable instrument, as it sometimes causes the urethra to contract upon it, thus simulating a stricture.

since heard from this gentleman, saying that he was still well.

A case of stricture in a married man, with a falling off of sexual power.

CASE XXII.—Mr. B., aged 26, came to me complaining of a bad stricture, of which he was considerably ashamed, as he had recently married. The sexual power, too, had to a great extent fallen off in consequence of the stricture, and the gleet he was afraid might infect his wife; he was therefore naturally anxious to get well quickly. The first time I saw him I found he had a tight stricture, and I could only pass a 5 French bougie; by passing one instrument on the top of another, however, I increased the size to 12 French at one sitting. I then recommended him to lay up. This he did on March 18. The same day I tied in a small bougie and then a small English catheter. On March 19 I passed a 9 English catheter. After this he had an attack of urethral (or urinary) fever, which, however, soon subsided. He was now obliged to go home for a few days to see after his business. He returned to me on March 29. I examined him with the urethrameter, and found that he had some 3 mm. of narrowing about half-way down the canal. On April 1 I performed the radical cure *without any anæsthetic*, and passed a 37 instrument into the bladder. This was a size or two larger than I need have used, as his penis was but a little above

The case is treated by dilatation and then by operation for the radical cure.

$3\frac{1}{2}$ inches round, but I thought it better to leave a margin on the right side. Although he took no ether or chloroform, he did not complain of the pain of the operation. He made a rapid and good recovery; in fact, altogether he was only laid up some ten days.

The urethra is still quite free three years after the operation.

CASE XXIII.—R. H., a young single man from Brighton, had already been under an operation for stricture, but the person who operated apparently did not appreciate the full capacity of the urethra. At any rate, when the patient came to me a full-sized instrument would not enter the bladder. I operated with Otis' urethrotome, September 1, 1885, and passed a 34 French instrument (his full size). I have just heard from him (August, 1889), saying that he can still pass the full-sized bougie, thus showing that the cure was complete.

A clergyman's case treated by dilation and internal urethrotomy

CASE XXIV.—Mr. H., aged 52, married, a clergyman, came to me on April 16, 1886. He had for some time been under a well-known surgeon (since deceased), who, however, for a twelvemonth back had failed, after most persevering trials, to pass any instrument at all. I tried instruments varying in size, and including the very smallest, but was not more successful. I put him on acon. nap. for a few days; but still could not succeed. I then put him on sil. for a week, and at the end of that time the medicine had produced its

effect, and I passed a 3, then a 4, and then a 6 olivary bougie at one sitting. On April 28 I tied in a small instrument; the next day I visited him at his vicarage and tied in a larger size; and so I went on until I passed an 11 English catheter. He now came to stay in my house, and on May 23 I operated for the radical cure, and passed an instrument 34 mm. in circumference, his penis being 3¼ inches round. The patient lost hardly any blood, and in fact had not a bad symptom after the operation. Some few days afterwards he left the house. I passed a full-sized sound for six weeks, and twelve months afterwards I heard from him, saying that his stream of urine was still quite free.

An officer of a ship is treated by continuous dilation and internal urethrotomy.

CASE XXV.—G. L., single, aged 26 (the chief officer of a steamer), had led a careless life, and had suffered from several gonorrhœas, from excessive drinking, and he had also had malarial fever on the West Coast of Africa, all of which had naturally affected his general health. When he came to me he had just come out of a large London general hospital, where he had been an in-patient for a fortnight. Whilst there they tied in a 6 English catheter for three days, but when he came out they could only pass one size larger—viz., a 7 English. The pipe was sensitive, and he found that injections of cocaine gave him relief. He first saw me on May 14, when I examined him,

and advised him to lay up, which he did on May 17. His penis was $3\frac{3}{4}$ inches in circumference, and he had a bad and very sensitive stricture. By trying continuous dilation, and *by giving him medicines appropriate to his condition*, I had, by May 20, dilated his urethra until I could pass a 26 olivary bougie. On May 23 I did my usual operation, and passed a 38 instrument. The stricture was a bad one, and seemed to occupy almost the whole length of the urethra from one end to the other. This being so, of course the operation was a more severe one than usual, but, in spite of this and of his bad general health, he left me about a fortnight after he came in, having had the satisfaction of seeing a 38 instrument pass easily along the whole length of his water passage.

An officer in the army is well twelve months after my operation.

CASE XXVI.—Captain S., aged 28, an officer in the Army, finding himself in the following dilemma, consulted me as to the best course to pursue. He had been under the care of a specialist, who had treated him for stricture for some time. However, he had not got beyond about a 20 French instrument, which he had been passing from time to time. Now, however, the patient found himself bound to marry and that very speedily. What was to be done? He did not like to marry with a stricture, and yet the date of the ceremony having been fixed, he could not, without putting himself

in a very awkward predicament and hurting the feelings of others, postpone it. I strongly recommended him to let me operate at once, and told him I believed I could promise a very speedy cure. But he would have it that there was not time for this, and accordingly, disregarding my advice, he married. Shortly afterwards he began again to have doubts and fears, and came a second time to me for treatment. This time he arranged to leave his duties and his home for awhile and came to stay with me in February, 1887. The operation was comparatively an easy one. The only narrowings were at the orifice and some 3 inches down. The penis was $3\frac{1}{2}$ inches round, and so I passed a 35 instrument, and also one a little bigger. He had not an unfavourable symptom except a rigor or two and some vomiting after the anæsthetic, which Dr. Williams administered. Altogether he was only laid up for a few days. I passed the full-sized bougie a few times for him afterwards, and sent him home rejoicing, although he was always rather of a nervous and hypochondriacal disposition. He saw me again at my request in March, 1889, and I passed as large an instrument as he would allow me to use (25 French), which entered quite easily, and the stream of urine was large and free, showing that the stricture had not returned.

A case of urethral stricture and of fistula in ano treated by operation.

CASE XXVII.—J. R., aged 45, single, a ship's carpenter, came to me recommended by a shipmate of his who had been treated for stricture in a Bombay hospital for three months, and had undergone an operation there, and where, notwithstanding this, the surgeon had only succeeded in passing about a 10 English catheter! J. R. himself I found to be a tall, spare man, having a stricture in the deeper urethra which would only admit a 20 French instrument. He also had a fistula in ano. I advised him to let me operate both on the stricture and the fistula at the same time. This he consented to. His flaccid penis was about the average size, some $3\frac{1}{2}$ inches in circumference. I operated first on his rectal fistula and then on the stricture, passing a 35 metal sound. As he had been abroad a good deal and had had malarial fever, he experienced a few shivers after the operation, but nothing beyond this. Altogether I only laid him up for a few days, and he then went about his business. He had the full-sized instruments passed occasionally for some weeks, and I doubt not he is now thoroughly rid of his troubles, but I have not seen him since, and think that he is abroad.

The urethra is quite free 13 months after my operation.

CASE XXVIII.—A gentleman (whom I will call Mr. N.), from the Junior Carlton Club, first consulted me in 1887. He had had a bad stricture of the deep urethra for many years, and had formerly

been operated on by Holt's method. It did not give him any permanent relief, and he had been since constantly in the habit of passing instruments himself—at which he became an adept. His age was 52, and he was unmarried. General health good, with the exception of a disposition to gout. Sometimes the stricture appeared much worse than at others. I operated on the 27th June, 1888. It was a difficult case, owing to the spasmodic action of the urethra. I passed a 35 metal instrument, however, directly after my usual operation (the penis being $3\frac{1}{2}$ inches in circumference) and also a few times after that. On July 24th, 1889 (over twelve months after I had last seen him) he visited me again, and I passed the same sized instrument (35) easily, thus showing that the urethra was still quite free throughout its whole length.

The urethra remained quite free after the operation

CASE XXIX.—Mr. C. D., a mechanical engineer, aged 32, single, consulted me 30th of May, 1888, for a deep-seated stricture. I could only pass a 16 French. Penis $3\frac{3}{4}$ inches round. I dilated the constriction by the gradual method to 24 French ; and on June 14th I operated, and passed a 38 sound, and this instrument I introduced a few times afterwards. On the 3rd of January, 1889, I again passed the same sound freely, showing that the urethra had not contracted at all. This patient, too, was able to insure his life after the operation,

having convinced the medical examiner that he was free from stricture.

The patient was able to insure his life after his disease had been cured.

Some of the above nine cases are examples of *bad* strictures. Of course, where the stricture is not so severe, the operation is more easily performed, and only necessitates a shorter rest.

TO SUM UP, the special points of treatment that I have insisted on are :

1. The great importance of medicines (so generally despised in stricture) when they are carefully selected by the rule that *large and small doses of a drug have exactly opposite actions.*

2. That, in case any operation should be called for, the trifling one of increasing a narrow meatus to its *full size* will frequently effect a cure, and that, if any further proceedings be necessary, all narrowings lower down the urethra be expanded and divided up to their *full size.* It is important to insist on this, as the normally large capacity of the urethra and the relationship existing between the circumference of the penis and that of the urethra are but little known or appreciated even in the profession.*

* So much is this the case, that it is rather difficult to get a bougie more than about 30 millimètres in circumference. A few years back I applied to two very large instrument makers—one in Paris, and one in London—and neither had a larger size than 30.

The treatment by medicines will often relieve the pain and irritation caused by strictures, and cause the urine to flow more freely, and, should any operation be necessary, those performed in the way I have recommended are by no means very painful, or an anæsthetic can be given to prevent any pain at all.

DISEASES OF THE URETHRA AND BLADDER IN WOMEN.

True Stricture of the Female Urethra is not very common, but symptoms simulating it may result from malposition or other disorders of the womb. The symptoms of stricture are frequent desire to urinate, difficulty in doing so, and irritability of the bladder. It occurs at the external orifice, and the proper treatment consists in dilation.

Fistula, or abnormal communication between the urethra or bladder and the vagina, may occur after childbirth, from an abscess, or from other causes. The dribbling of urine through the preternatural aperture is very distressing to the patient and to her friends. The cure is by operation.

Small Tumours of the Urethra are common in women, but rare in the other sex. In women they may be found as small vascular swellings around or within the urethra. They give rise to a

good deal of sympathetic irritation. There is a frequent desire to urinate, and great pain in doing so; the water is thick, the loins may ache, and there may be pain in the lower part of the abdomen. In fact, they give rise to many of the symptoms of stone. The treatment should not only be medicinal, but, if possible, local also.

The misery of an irritable bladder in women.

STONE is comparatively rare in women; IRRITABILITY OF THE BLADDER, however, often closely simulates it. This irritability is of common occurrence, and is a most distressing complaint. There is a frequent desire—a constant urging—to pass water, and the patient oftentimes has added to her misery by having acquired the habit of taking opium or a narcotic of some sort to relieve her troubles. The complaint may be sympathetic, being due to some local disorder, such as disease or malposition of the uterus, worms or piles in the rectum, vascular tumours of the urethra, or prolapse of the anterior wall of the vagina; or it may be caused by some unhealthy condition of the urine. In others (especially unhealthy girls) it may be due to a thickened and congested state of the mucous membrane of the bladder. In some, too, it is said to be due to a neurotic affection—an unhealthy nervous or hysterical condition. Whatever may be the cause of it, however, the disease, when once set up, is difficult, *but not impossible*, to remove.

The application of remedies to the part affected is often of great service. I will give only one example, as my space is exhausted.

Case XXX.—Mary B., aged 30, first saw me on March 10. She brought with her a sample of her urine containing thick ropy muco-pus tinged with blood, "looking like a lump of flesh." She constantly passes this stuff in the urine, and she is troubled by a *very* frequent necessity to pass water both night and day. The urine also contains pieces of stony matter. I examined her for stone in the bladder but found none. I first treated her with cantharis internally, and the usual plan of washing out the bladder and injecting cleansing and soothing applications.

Finding this did but little good, I tried her with other medicines, and amongst them with ammonii benzoas, with the idea of dispersing the phosphatic stony concretions in the urine. Still the improvement was slight. Having formerly used successfully a very weak lotion of cantharis in irritation of the skin, it occurred to me that it might prove useful if applied locally in this case. I tried it and found it successful, but I varied it from time to time with applications of a lotion containing copaiba, which, as is well known, has a marked action on the urinary mucous membrane. I also selected dulcamara for an internal medicine, as

she always found herself worse in damp weather. Under this treatment she improved wonderfully, so much so that at the beginning of May she could retain her urine a long time, being only troubled to pass it three or four times during the day and once during the night. Owing to unavoidable circumstances she was now compelled to discontinue her attendance; otherwise I have little doubt that, with further treatment, she would not have been disturbed at all when in bed at night.

In less severe cases I have found that internal medicines only acted very effectively.

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